

administered to patients, who are suspected to have cerebral apoplexy, in ambulance cars. Since in the actual cases of acute cerebral apoplexy the pathological condition is prevalently aggravated within 2 weeks after onset, sufficient effect can be expected if ginsenoside Rb₁ of the present invention can be administered during this term.

Further, since the pharmaceutical compositions of the present invention exhibit novel effect and efficacy for vascular regeneration and/or reconstruction, they appear to be effective for diseases with the major symptom of blood flow disorder (aortitis syndrome, collagen diseases, acute peripheral arterial occlusive diseases, thromboangitis obliterans, arteriosclerosis obliterans, thrombophlebitis, diabetic retinopathy, diabetic nephropathy, retinal embolism, Raynaud's disease, Raynaud's syndrome, myocardial infarction, decubitus, peripheral circulatory failure, angina pectoris, ischemia-reperfusion injuries of liver, kidney or heart, etc.). As described in JP98/365560 and PCT/JP99/02550: "Brain cell or nerve cell-protective agents comprising ginsenoside Rb₁", in the diseases with blood flow disorders, to suppress cell death in the tissues suffering from blood flow disorder is the efficacy of ginsenoside Rb₁, which should not be overlooked. Consequently, in the diseases of either central or peripheral tissue origin, in which blood flow disorder is the major symptom ginsenoside Rb₁ can reduce the damages or injuries of tissues or cells

suffering from blood flow disorders through at least two action mechanisms.

Generally, the etiology of the primary lesion of nervous or brain diseases varies from disease to disease. For example, cerebral apoplexy is caused by cerebrovascular, obstruction or blood flow failure. Neurodegenerative diseases are developed as the results of a complex mixture of gene abnormality, environmental factors and life-style habits, and thus it is not always easy to prevent progress of the primary lesion of each neurodegenerative disease by determining its primary cause(s) and excluding the cause(s). On the other hand, whatever the causes of the primary lesion in cerebral apoplexy or in neurodegenerative diseases are, once the primary lesion is formed, various brain regions having synaptic connections (fiber connections) with the primary lesion site develop the secondary degeneration. Perhaps, in the secondary degeneration of nervous tissues associated with such synaptic connections (fiber connections), at least in part certain common mechanism(s) may be involved. In the present invention, intravenous administration of low concentrations of ginsenoside Rb_1 can effectively suppress the secondary degeneration of the thalamus after cerebrocortical infarction, and the secondary degeneration of the nervous tissues after spinal cord injuries. Based on these facts, intravenous administration or nasal administration of ginsenoside Rb_1 is effective for suppression

of the secondary degeneration of the nervous tissues subsequent to the other types of cerebral apoplectic primary lesions (cerebral hemorrhage, subarachnoidal hemorrhage or transient cerebral ischemic attack) and subsequent to the primary lesions of the other brain or nervous diseases (Alzheimer's disease, Pick's disease, spinocerebellar degeneration, Parkinson's disease, demyelinating diseases, chorea, polyglutamine diseases, cerebral palsy, amyotrophic lateral sclerosis, glaucoma, senile macular degeneration, AIDS encephalopathy, hepatic encephalopathy, encephalitis, progressive supranuclear palsy, multiple sclerosis, diabetic retinopathy, diabetic neuropathy, retinal detachment, retinal pigment degeneration, carbon monoxide poisoning, newborn infant asphyxia, peripheral nerve injuries, spastic paraplegia, progressive supranuclear palsy, vascular lesions in the spinal cord, mitochondrial encephalopathy, meningitis, etc.). Further, administration of ginsenoside Rb₁ is effective for compression or paralysis of the spinal cord and/or its roots accompanied with herniation of intervertebral disk, spinal canal stenosis, spondylolysis, slipping diseases, cervical spondylolysis and ossification of the posterior longitudinal ligament. It is also effective for facial nerve paralysis. These efficacy and effects of ginsenoside Rb₁ can delay aggravation of the pathological conditions of patients suffering from intractable brain or nervous diseases and can contribute to the improvement of QOL